

AMERICAN
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JOURNAL

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1914-15

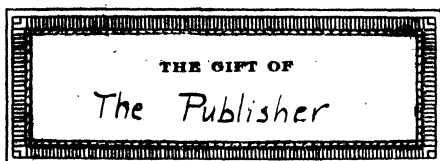
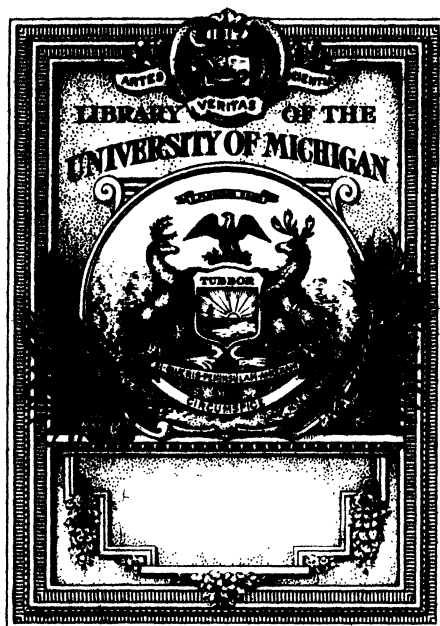
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SEPTEMBER 15.

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The AMERICAN DENTAL JOURNAL

BERNARD J. CIGRAND, M. S., D. D. S.

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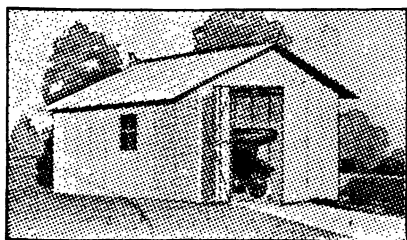
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September 15 EDITORIAL AND COMMENT

1914

THE SURGERY OF WAR - LET US HAVE PEACE

Just now the civilized world is engaged in two problems—one how to battle; the other how to bring peace. The Red Cross societies of Europe helped us in 1861 and in 1898. What are we doing to help Europe in her hour of anguish?

Governor Edward F. Dunne appointed your editor one of the Centennial Peace Commissioners of Illinois. In the recent peace service I was assigned to organize northern Illinois. All creeds, all parties and organizations were represented. At the meeting on October 4th I spoke as follows, as taken from the daily press reports:

It affords me great pleasure to publicly acknowledge my gratitude to the ministers, pastors and priests of the northern section of Illinois for the earnest manner in which they accepted the concord services suggested in the *Aurora Beacon-News*. I

am also indebted for the liberal notices and services rendered; since without this service this memorable day of prayer would not have attained the far-reaching support in carrying out the Wilson-Dunne proclamation.

Every day I am becoming more convinced that John Milton, that great reverential writer, has sounded the truth nearest when he wrote to Cromwell: "Peace hath her victories no less renowned than war." We are gradually beginning to see the



JOHN ADAMS

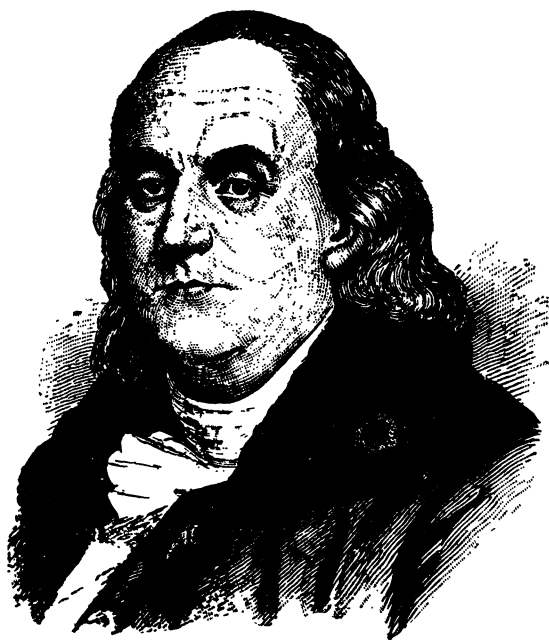
reason and the logic of the remark, and as we study the career of man we will tend more and more to appreciate this nearly forgotten realism. Our own Franklin, when in England as the colonial agent, labored to impress the king with the thought of giving the colonists justice and leave the sword in the sheath. He appealed with eloquence and brought every argument to press home the thought that there should not be war—that "we

are kindred in blood and children of the same destiny." But the king in his might willed otherwise, and the war, with its desolation and death, came as the edict of oppressors.

Shakespeare, too, also of England, gave to other lips his idea of war. He had portrayed tragedy and war in many scenes, and was familiar with its havoc. He emphasized the lines: "Oh, war! Oh, son of hell!"

In the past we have emulated too freely only those of military careers. We have liberally eulogized only those who with sword or gun have in the hysteria of battle lent their effort in the struggles of death; while those who have with heroism served the people in a peaceful manner have been passed by unnoticed and oft forgotten. In this attitude we are teaching the rising generation to praise and admire only the military heroes. This is a mistake; and every error which a person or nation makes must be compensated for, and the surest way to avoid punishment is to refrain from the mistake. Let us show by example or by demonstration that our great have also been men and women who have not served behind forts or rendered military functions; that our beloved characters of history have frequently been those who rendered aid to the community or nation by a peaceable method. Your minds may not at this moment remember many such peaceable heroes; but permit me to refer to Thomas Jefferson, the author of a document destined to grow more memorable as time comes marching on. He had not the military training; yet he rendered an invaluable labor when he penned the lines that gave equality to all peoples. He was opposed to a large army—it saps the people's purse. He dreamed of a day when the world was so Christianized that this land would not require a navy. Adams, that giant from New England, was not a military character; yet it was his eloquence which made the adoption of Jefferson's work possible. Robert Morris, who assumed the financial burden of the colonies; he who went from house to house borrowing money and giving his personal note as security; he, too, was without the military renown. Then there was that liberal-minded Charles Carroll, of Carrollton, who staked all his vast fortune to aid in the cause;

he, too, had not the heroism of the battlefield, but he possessed much of the bravery of the chamber. John Hancock, who directed the congress which instituted these great changes in the new world, was without military plaudits. And that wonderful master of law, that man who shaped the legal destiny of the Supreme Court, John Marshall, unequaled as a safe and sane administrator of our constitution; he also belongs to the



BENJAMIN FRANKLIN

army which fights only with tongue and pen; yet he received victories no less renowned than those of war. It was his writings and his addresses which inspired and gave us a Webster, who in the halls of congress crossed voices with the fiery tongue of Hayne. Yet in that peaceful, unwarlike battle he laid the foundation for the salvation of our union. He inspired our own Lincoln, and aided in building that master of governments into

the stalwart savior, Abraham Lincoln. It is a mistake to portray Lincoln as a war-loving person; he loved peace, he longed for peace and wept for peace. On bended knees he prayed for peace, and in his inaugural address he threw the responsibility of that war, if it came, upon the south, for he practically said: "Yes, the southland must begin the war; you must draw the sword and fire the first gun."

On an occasion such as this, when peace seems to be the topic sought, a man's name comes to me who deserves great praise tonight; a man who could have easily plunged our nation into a bloody civil war; that man was Samuel J. Tilden. When the returns came in which indicated that he was the elected man, and that Hayes had been defeated, and when later, because our constitution did not afford a remedy for the unfortunate conditions growing out of the disputes of the election, some men wrote to him and others called, saying: "You have the popular vote; take the chair of president by force," it was Tilden who emphasized the victory of peace when he declared that he would never lead his country into civil war; for he would rather die in retirement than cause the death of a single soldier. Grover Cleveland, much abused, though now highly praised, was without a military career, as were his great disciples, Jefferson and Tilden. The beloved William McKinley did not love war. When the true history of the Spanish American war is written it will tell that President McKinley was forced into the war; that congress and the people compelled him to give the command to shoot.

We are indeed blessed today in having a man at the helm of the government who is truly an advocate of peace; and we may glory in the thought that if President Woodrow Wilson has his way, and if his classical prayer and petition is answered, this country will not only remain in peace, but it will assist honorably in restoring peace under every flag of the world. His proclamation is different from that of any other president, in that the day of prayer is not requested for our sake, but for the neighbors' sake—for the nations across the sea. Thus unselfishly he and we are today and tonight imploring divine

Providence to compel the fighting nations to stem the flow of blood, to bind up the wounds, to forget their ambitions, to forgive the wrongs, and again come into the fold of the Lord in the reign of peace.

It is not for me to portray the horrors of this disastrous European war. Its havoc, its grief, its sorrow, its sacrifice, its suffering and its woe are a daily shock to your conscience as Christians, and our every effort, our every thought, should be to so conduct ourselves that the hour of peace may be brought



IN THE NAME OF PEACE

closer to these brave men in arms; for war too often is but the madness of the many for the gain of the few; the hysteria of the multitude for the hilarity of the directors. And while it may not be the case in this present stupendous clash of steel, it certainly appears bereft of Christian charity and devoid of humanitarian impulses.

Even military men, commanders who won victories, deplore war. Wellington, who ordered thousands to leap, ride and

march over dead and dying, remarked: "If you could have seen a single day of the battle you would pray to God Almighty to help you forget it and never again to witness such a scene." Gen. U. S. Grant, victor, always hoped for peace, and his famous saying, "Let us have peace," should inspire us always to avoid war as you would famine and pestilence.

With a lesson of national history brought vividly before us, we are more inclined to remember how our civil war rent asunder much of what he held in pride; how it destroyed our cities; how it wasted the young and how it killed the loved ones of every section. Teach the truth; the truth of the fact that peace hath her victories, no less renowned than war, and with a patriotism of peace, with a citizenship founded on justice and a home built on Christian charity, we as a nation can prosper and thrive and be a godsend to other nations still struggling to reach the plateau where we now stand.

COMMENT

In the next issue of THE AMERICAN DENTAL JOURNAL your editor will give a historical sketch of "The Dentists' Mutual Protective Alliance," and follow the same with the origin and evolution of casting methods. All interested should send in their subscriptions, as back numbers can not be supplied, because the entire edition will be sent out to subscribers and students. If you are behind on your subscription, send one dollar to Dr. B. J. Cigrand, Batavia, Ill.

* * *

From Ligonier, Pennsylvania, comes this regretful letter (and your editor has replied):

EDITOR CIGRAND: Please discontinue sending me THE AMERICAN DENTAL JOURNAL. As I have been up against it of late, I am not able to pay for it. For some time past my health has been failing, and I am not able to do much work, and I have a good-sized family to support. So I am just obliged to cut down expenses. I am sorry, but I can not help it. Wishing you success in your good work, I remain, truly yours,

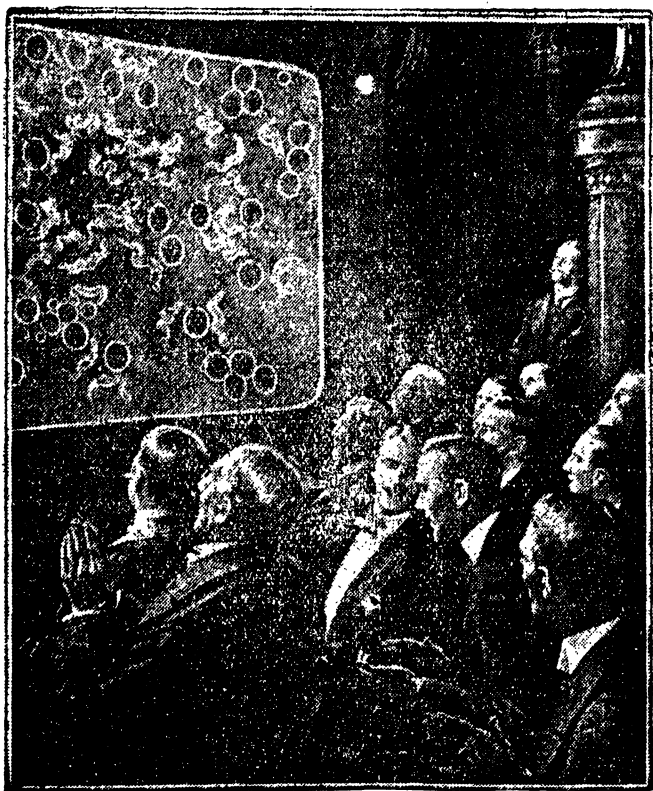
R. H. R.

It is said that "An honest confession is good for the soul." Let me add that it is good for the body and the mind, and he shall have the journal gratis.

LIVING PICTURES OF BACILLI

[From the "London Illustrated News."]

[What a wonderful feature it will be to observe the action of bacteria in the blood-flow! Who can foretell the wondrous discoveries that will come from the "eyes of the camera?" Dentistry will surely profit liberally by the cinematograph's latest progress. The readers are given a picture of this great demonstration.—EDITOR.]



**A CINEMATOGRAPH DISPLAY OF THE PRODUCTION OF SLEEP-
ING SICKNESS IN A RAT.**

Our artist illustrated a remarkable exhibition of living pictures at a meeting of the King's College Hospital Medical Society the other day, a demonstration designed to prove the possibilities

of cinematograph as applied to micro-photography. A number of living pictures of bacilli were shown. Among the films was a series illustrating the experimental production of sleeping sickness in a rat. The movements of the trypanosomes among the blood corpuscles, and their gradual development until the death of the rat, were shown with great clearness on the screen. Many equally interesting films followed. All the films were exhibited by Messrs. Pathe-Freres.

* * *

The following letter is both unique and practical; and if money talks, why, then, the message is profitable:

DEAR DR. CIGRAND: Inclosed please find \$1 bill to place opposite my name on your mailing list. I believe there is an aching cavity there. Please do not drill the cavity larger, but fill with this soft material, which may last the better part of a year. Kindly notify me when it washes out, that I may repeat this painless process. You see I approve of your editorial policy. Yours very truly,

F. A. THURSTON, D. D. S.

Chicago, Illinois.

* * *

The annual clinic of the Chicago Dental Society will be held in the Hotel LaSalle January 29 and 30, 1915. The officers and committees are planning a program for this meeting which they feel sure will be of interest to every dental practitioner who can arrange to be in Chicago at that time. Dr. T. L. Grisamore is president and Dr. P. D. B. Idler is secretary. Lend them your support.

THIS journal has set a pace in dental journalism by giving its readers each month a splendid reproduction of some famous or historic subject of dental connection. The leading literary journals can afford to give their readers such ocular luxury because of two reasons: First, the enormous paid-up subscription list; second, on account of the enormous revenue obtained from their advertising space. The time has come when it is believed that high appreciation from the profession can do the same for dentistry. Subscribe one dollar.

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ORIGINAL CONTRIBUTIONS

SURGICAL RELATIONSHIPS OF MOUTH INFECTIONS

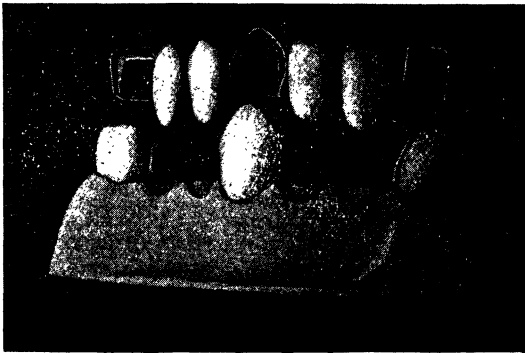
BY THOMAS B. HARTZELL, M.D., D.M.D., MINNEAPOLIS, MINN.

[The following article, read before the New York Academy of Medicine and published in the *New York Medical Journal*, deserves to be read by all practitioners who are anxious to know the systemic effect of poor teeth. Let me know what you are doing along this same line of research.—EDITOR.]

The varied relationships of constitutional infections arising from primary foci in the oral cavity have engrossed my entire attention for several years, and it is the surgical side of the question that I will consider. I will, therefore, dwell for a few moments on the surgical possibilities of mouth infection.

There is no question in the minds of any of us who have investigated the bacterial flora of the human mouth that the possibilities of all kinds of infections are ever present. Almost every known type of pathogenic organism finds its way, sooner or later, into the oral cavity. Many of them make their permanent residence there. The skin and mucous membrane which protect the balance of the body signally fail of their office here. This is because the teeth, in erupting through the mucous membrane, burst that membrane, and its continuity is never restored. The mucous membrane ending abruptly about a line below its surface, thus leaves a free margin, creating a delicate crevice between the tooth surfaces and the surrounding tissues, which is a door through which inoculations can occur. The bacterial flora on the tooth surface is always great in the mouth of every individual, unless special care and attention is given the tooth surface. From this bacterial coat incursion may constantly be made into the crevice, and thence into the tissues. Thus, as a rule, every individual has to a greater or less extent always present on the tooth's surface at this unprotected margin the potential for the deep infection of the surrounding tissues.

In a number of recent examinations of freshly extracted living teeth we find bacteria distributed for a considerable distance in the peridental membrane where the tissues seem to be in a moderate state of health and present no lesion to account for the presence of bacteria. Their presence in the tissues is readily explained when one considers the fact that where the mucous membrane ends abruptly there are small open channels a line below its surface leading into the vascular network of the tissues. These channels are readily demonstrable by means of a stream of oxygen gas discharged under the gum's free margin. It is these channels that afford paths for infection, which incursion is constantly being made from the tooth surface. This



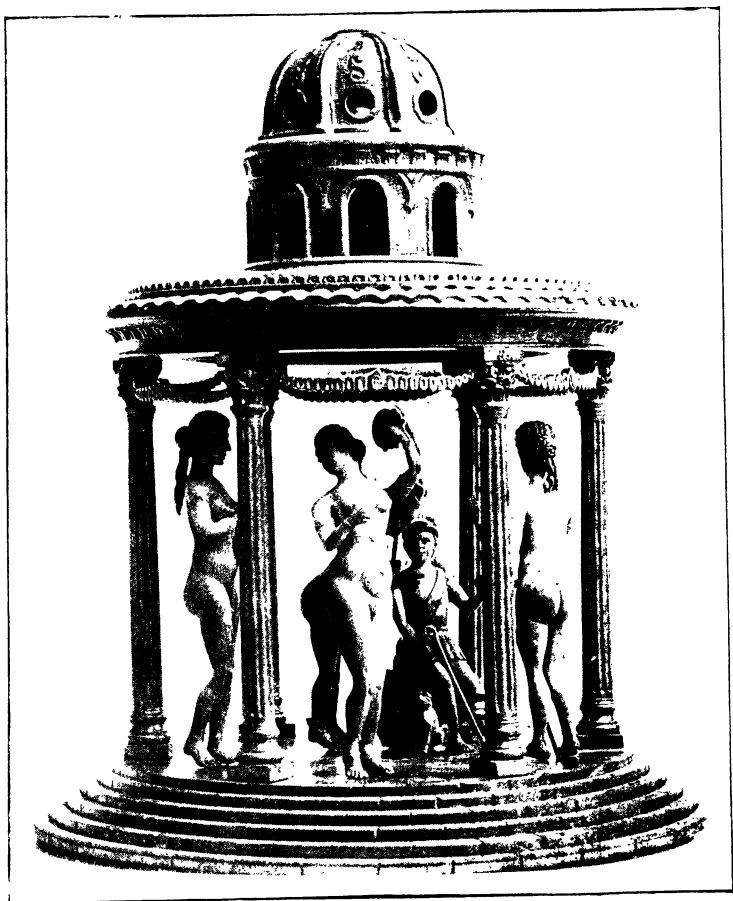
DANGER IN IRRITATED GUMS

infection gains ready access through the glandular structures in the pericemental tissues to the porous cellular bone surrounding the teeth, and thence into the lymphatic and general circulation. The first effect of this bacterial incursion is to create a mild gingival inflammation. This mild gingival inflammation is succeeded by a more intense cellulitis, with the development of pus.

This pus is disposed of in two ways. By far the greater part escapes over the edges of the mucous membrane into the oral cavity and is ingested. But many micro-organisms are driven directly into the tissues by the intermittent application

of force in mastication. This intermittent force causes the teeth alternately to rise and sink in their sockets. This rise and fall of the tooth, which in most mouths happens thousands of times a day, makes certain that a portion at least of the infectious material surrounding the tooth in the deep crevice will be driven into the broken blood vessels and lymphatics of this locality. These micro-organisms go directly into the tissues and small blood vessels in the pericemental structures. These paths lead directly into the circulating blood. The glandular structures demonstrated by Dr. Black become involved, and a part of this bacterial growth is carried into the lymphatics and lymphnodes of different parts of the body. The weight borne in twenty-four hours by the grinding or morsal surfaces of the teeth the author estimates to be 5,000 pounds a day, and it is the elastic cushion of peridental membrane which, by permitting the teeth to sink into their sockets and then to rebound, protects the alveolar process from rapid absorption and the teeth themselves from cleavage or splitting. The up-and-down movement of the teeth in their sockets under the enormous application of force is a factor favoring the further incursion of bacteria into the tissues, thus insuring slow inoculation of a certain quantity of any micro-organism which happens to have lodged in this crevice.

Where osteomyelitis occurs in the bone of the socket the infected area rapidly increases. The circumference of a normal denture is about thirty linear inches; and if a pyorrhœal condition exists under the gum margin for one-eighth of an inch, we have one-eighth of thirty, or three and three-fourths square inches of absorbing surface. This, however, may be greatly increased as the tooth's socket becomes destroyed, and the area may easily become double that. The dental abscess occurring around the root ends of teeth with dead pulps is an additional source of systemic infection; and the porous character of the bone, together with the constant make and break in the application of force in mastication, enables the existence of such an abscess without symptoms of pain and soreness, to drain for months, and even years, thus affording a constant flow of bacteria into the circulation. The recent examination of pus taken



JUDGMENT OF PARIS
CARVED BY DR. T. S. HITCHCOCK—DENTIST



from blind dental abscesses has revealed the presence of both ærobie and anærobie forms of streptococci; and it is this blind dental abscess, and the accompanying pyorrhœa pocket, which eventually, by their constant inflowing streams of streptococci, break down the resistance of many individuals, so that, when they are subject to stress of any sort, the toxin habit established by these constant streams of infection makes it impossible for them to override disease. This explains many a case of death from comparatively slight surgical operations—operations undertaken in the best of environment and often trivial in their nature.

The metastatic possibilities of these seemingly trivial mouth infections have not until very recently been apprehended by either the dental or medical profession. That their importance is far greater than has hitherto been apprehended is well illustrated by an intensive study of eight cases recently made by the author. In these eight cases abscesses and pyorrhœa pockets were located by Rontgenograms.

CASE I

was that of an individual who had suffered for nine months from multiple joint infections which necessitated his remaining in bed most of the time. No adequate source for his infection had been discovered. All treatment up to the time the individual was seen by the author had been of little or no benefit. None of the usual sources of infection seemed present; hence the radiographs. In order to obtain the material from the sockets and root ends of the abscessed teeth with as little contamination as possible the following technic was adopted: The mouth was thoroughly and vigorously scrubbed with hydrogen dioxid, followed by alcohol. The teeth in question were dried and coated with Churchill's tincture of iodine. Sterile gauze was carefully packed around the teeth to prevent contact with saliva. An actual cautery was then inserted under the gum margin to destroy as far as possible whatever of bacterial growth was free under the gum margin. This was again followed with a full application of iodine. The teeth were then immediately removed from their sockets and the root ends nipped off with rongeur forceps and dropped into culture media, first taking control

smears for comparison with whatever might develop in the culture. This technic was followed carefully in eight cases. In the first tooth removed in the first case only micrococcus catarrhalis was isolated, and as this soon died out in culture we could not study it further. In the same mouth, however, a second abscessed tooth was removed from which was isolated a hemolytic streptococcus. From this a vaccine was made, which was administered to the patient for six weeks. When first seen the patient could not get his shoes upon his feet nor raise his hands above his shoulders. At the present time he is able to walk, raise his hands twelve or fifteen inches above his head, and the swelling about his joints is almost gone.

CASE II

Woman, who had been in bed eighteen months, whose family history was good, and whose personal history was excellent. The diagnosis was chronic arthritis deformans. When first seen she was unable to walk, and the joints of the shoulders, elbows, wrists and fingers were all swollen. Sacroiliac joints were swollen and tender, as well as the knee and ankle joints. Her finger joints were swollen so that the skin was tense; the bases of the finger nails and finger ends were blue, cold and clammy. The patient was suffering constant pain. Radiographs showed abscesses present in the mandible. The same technic for removal of the teeth was followed in the second case as in the first case. Both streptococci and staphylococci were found in the tips of the sockets. Vaccines were made of both staphylococci and streptococci, which vaccines were administered for some time. The dose in the case of the staphylococci was raised to 250 million; of the streptococci, to 20 million. The patient suffered increased pain and tenderness for two or three days after every dose of vaccine, which pain and tenderness receded from the fifth to the sixth day, leaving the joints somewhat improved. The patient after two months of treatment was able to sit up in bed and to walk when she wished. The finger joints could be flexed considerably. The wrist joints became movable again, and the swelling of the fingers and hands went down about one-half. The patient gave every indication of making continuous improvement and a permanent cure.

CASE III

Man. When first seen by the author his mouth was exceedingly septic. His teeth were very loose, and the alveolar process at the gum margin was exposed. The mouth was cleansed as well as could be done, though there was very little hope of the patient's recovery. Examination and smears from the alveolar process and gums showed streptococci and fusiform bacilli in great numbers. Patient very shortly after died, and in the post-mortem cultures were taken from the body of the lower jaw, and also from the heart's blood. Streptococci were found in both situations.

CASE IV

was that of a man aged 40 years. When first seen in the hospital the patient exhibited a mild febrile picture, temperature rising and falling. He slowly became more and more septic. Absolutely no lesion could be discovered to account for the septic condition until the jaws were examined, when it was found that an area of necrosis existed around two central incisors. Blood cultures were made by Professors Larson and Barron, of the medical department of the School of Medicine of the University of Minnesota. Smears and cultures were made from the necrotic area around the teeth, and revealed the presence of fusiform bacilli in great numbers. Blood cultures also produced a rich flora of fusiform bacilli, showing the direct relationship between the mouth lesion and the general septic condition. A careful post-mortem examination, conducted by Professor Robertson, of the department of pathology of the School of Medicine, Professor Ries and the author, revealed absolutely no lesion, except the area of necrosis around the central incisors of the upper jaw, and this had spread, when death occurred, to the whole palate.

CASE V

was that of a woman aged 40 years. The diagnosis was chronic arthritis deformans. The mouth was exceedingly septic, containing half a dozen abscessed teeth. The teeth were removed, the author following the same technic as in the first and second cases. The examination resulted in the finding of a nonhemolytic streptococcus in the dental abscesses. In this case the

joint infection had existed for so long a period of time that little progress, if any, was made toward recovery.

CASE VI

was that of a man (aged 35 years) who suffered an acute joint infection of the sacroiliac, lumbar, shoulder and wrist joints. Inflamed tonsils were removed. Patient made fair progress for two weeks, when repair seemed to cease. Radiographs revealed abscesses in right lower molars and left upper bicuspid. Extraction of the right lower molar, following the same technic as in the first case, resulted in the finding of streptococci, and the removal of the tooth and evacuation of the abscesses started the patient on toward repair.

CASE VII

was that of a man (aged 68 years) in failing health. The urine contained albumin and many casts. Radiographs revealed the presence of abscesses and pyorrhœa pockets. Evacuation of the abscesses by surgical means, burring through the alveolar process and curetting vigorously, together with the obliteration of the pyorrhœa pockets, resulted in rapid recovery, both albumin and casts now being absent.

CASE VIII

was that of a man aged 55 years with the history of an ulcer of the stomach, which obtained over a period of years, the patient getting better now and then, having a recurrent breakdown in the mucous membrane of the stomach and discharging blood in the stools. The mouth presented an exceedingly septic condition. The abscessed teeth were removed, and many pyorrhœa pockets around the teeth, which were worth saving, were stamped out by the method of root planing and curettage of the alveolar process. The patient made a fairly rapid recovery. In two months the tenderness in the abdominal wall ceased, and in four months the digestion had so improved that he was able to eat anything that he craved, and took up his work with the energy of a man of 30 years.

FIFTY cents, or one-half of a dollar, will give you THE AMERICAN DENTAL JOURNAL for six months.

TRIFORMIN IN DENTAL SURGERY

BY DR. C. WEZEL, WIESBADEN

[This is a remarkable discovery, and let us hope that it proves to be actual.—EDITOR.]

Root treatment, in its relation to inflamed pulps and periodontitis, covers a large field and has been the subject of much discussion. Medicaments for the treatment of such cases are many and varied; but my object in the present article is to bring to the notice of the profession generally the great advantage of triformin pastilles (Meise), as shown by my own observations.

Triformin pastilles can be employed with beneficial results in pulp capping, cauterization with extirpation, or with amputation, gangrene of the pulp, and in resection of the root.

PULP CAPPING

The treatment of the inflamed pulp has for its object the conservation of the pulp. This organ, supplying (as it does) nutrition and sensation to the dentine, should obviously be preserved if possible—especially in the case of a young patient. Boenneken and Escher were strongly in favor of simply capping the pulp (especially in the case of first molars), even when, owing to deep-seated caries, the pulp was overlaid by masses of hard, carious dentine. In hyperæmia, or acute pulpitis, the pulp should always be saved. A frequent mistake nowadays is the employment of strong antiseptics, which, instead of conserving, frequently destroy the pulp. It is advisable, therefore, that only those medicaments should be made use of which have no corrosive or devitalizing action, but rather assist the living pulp to regain its normal condition.

In my experience the most successful method of capping has proved to be the following: Having cleared away all food debris, I syringe out the cavity, using gentle pressure, with warm water, to which a few drops of lysol or carbolic acid has been added. Having thus cleansed the cavity, I fill it with the triformin liquid, slightly warmed, and leave this for a few minutes. After which I excavate the caries and again fill with

triformin liquid. This can be sealed in for a few days if thought desirable. The cavity must next be thoroughly dried out; then moisten a small piece of absorbent cotton and place it in the cavity, while one of the dry pastilles is lightly packed into the cavity. The permanent filling can then be at once inserted without further operation. I should like to call attention to the fact that this condition of the pulp is not regarded as pathological, but merely as a slight hyperæmia due to physical causes; and therefore the treatment which will preserve the pulp and maintain it in normal condition is the one to be advocated. I consider that the thoughtless devitalization of a pulp, which has even a *possible* chance of life, is endangering needlessly the future usefulness of the tooth. Triformin (Meise) contains eugenol, and every practitioner knows that this drug promotes the health of the pulp and does not act as a devitalizer. The thymol contained in the preparation has a sedative effect, and also acts as a devitalizer. After numerous experiments, including tests with the induction current, I have always found the pulps so treated perfectly healthy.

CAUTERIZATION WITH AMPUTATION

The radical operation in case of acutely inflamed or irritated pulps is their devitalization. This can be best effected by nerve-destroying pellets (Meise). These contain arsenious acid, chloralhydrate and carbolic acid. In this recent preparation we again meet with arsenious acid, which since 1836 has occupied the premier position among the agents employed for pulp devitalization. Arsenious acid is one of the drugs which are readily absorbed by the tissues. It is of the greatest importance that ingredients should also be present to mitigate the the pain, which usually lasts from ten to fifteen minutes after the arsenic commences to act. As soon as the devitalization is complete amputation of the pulp may be proceeded with. Thirty-five years ago amputation of the pulp was considered to have a great future; not only on account of the simplicity of the method, but also being more agreeable from the patient's point of view. This treatment is adopted especially in the case of molars and bicuspsids, the stumps of which can often only be

extracted with considerable difficulty, and even danger. By pulp amputation is understood the operation by which the cauterized pulp is removed from the opened pulp chamber by means of sharp, round burs, and the remaining canals antiseptically capped. In actual practice pulp amputation is advisable in cases of pulpitis of the deciduous teeth; also in those of the second dentition, where the total extirpation of the pulp and the filling of the canals to their apical foramina is impossible or undesirable (as in the case of hysterical, neurasthenic and bed ridden patients). In these cases it is advisable to amputate also in central incisors. Pulp amputation is also indicated when the patient is over 60 years of age.

The technique of the amputation and subsequent filling is quite simple. To insure success it is essential to flood the amputated roots immediately with an antiseptic, the principle to be borne in mind being entire removal of the coronal portion of the pulp, leaving the root portions quite isolated. Needless to remark the rubber dam should always be employed in any operations of this nature. After removing the contents of the pulp chamber the latter should be dried with hot air, and a small pledget saturated with triformin liquid inserted and allowed to remain for some minutes, to enable the fluid to diffuse itself through the canals. Repeat this once or twice, and then place in the cavity a fair-sized triformin pastille, adapting this by means of a ball ended plugger, and upon this the permanent filling can be built up.

PULP EXTIRPATION

This is still advocated by many of the older members of the profession in all cases of pulp inflammation, and the use of triformin pastilles (Meise) is advocated. When extirpation is performed hemorrhage frequently occurs. This is often wrongly considered as of no moment, and should failure result the blame is laid on the materials used to fill the canals. Whereas, if bleeding takes place, we ought to redouble our precautions to prevent septic trouble. A dressing with triformin fluid should be applied. This will frequently stop the flow of blood, and in any case insure sterility. The wool pellet soaked in the triformin

fluid may be allowed to remain in the cavity for a day or two, being sealed in with any temporary cement. The pastilles may now be inserted. I usually crush them on a glass slab and mix with triformin liquid like an ordinary cement. After drying the mass between blotting paper, and as soon as it has become easily workable, I introduce it into the root canals. Strict attention must be paid to the closing of the apical foramin and the exclusion of air from the canal. The closure of the cavity should be completed by a dry pastille, and the further treatment can then be proceeded with.

GANGRENE OF THE PULP

Triformin pastilles have been employed with great success in treating gangrenous conditions of the pulp. The object of cleansing and sterilizing the canals in such cases is to eliminate all trace of the decomposed pulp, to destroy all micro-organisms, and so prevent future trouble from the infection of the surrounding tissues. Nearly every practitioner has his own method of treatment, and in a short article it is impotsible to mention even those most frequently adopted. Personally I formerly employed balsam of Peru, together with the thermocautery (which latter was first introduced by Gordon in 1866), in accessible canals. I first introduce iodoform into the canals in order to disinfect them; I then treat with triformin liquid, and fill in the manner already described, finishing with a dry triformin pastille, and completing the filling with any cement.

A BOOK WORTH HAVING

BY DR. B. J. CIGRAND

At last the dental profession has a real authority on dental jurisprudence. Prof. Elmer Dewitt Brothers, who for fourteen years has been a member of the faculty of the University of Illinois, and in this capacity lectured before both the dental and medical students, has published the lectures that pertain to dental practice.

The book is published in good, clear type, and is freely

annotated with valuable references. The work is a live and present-time index to all forms of legal complications involving both patient and practitioner. The volume belongs in every library in the land, since the public as well as the dentist should be familiar with the laws regulating dental practice. It affords me great pleasure to recommend Prof. Brothers' book, which is the first real attempt to place us in touch with the law as it regulates our profession.

The book of 220 pages is published by the C. V. Mosby Company. If you desire a copy send \$2 to THE AMERICAN DENTAL JOURNAL, and it will be mailed at once to your address.

The following extract indicates the value of such a book of reference:

"This work has been prepared with the view of arranging in concise and readable form those principles and rules of law which most affect the dentist in his individual and professional capacity. It is a development of a course of lectures which the writer has been delivering to classes of dental students since 1895, and embodies what he found most useful and interesting to the progressive, inquiring mind of the student. It is believed the work will be instructive to any practitioner who desires to inform himself on this very important subject.

"While the curricula of dental colleges have scheduled this subject for a number of years, it has been the observation of the writer that the instruction has frequently been limited to a few talks on the ethics of the profession, with a possible discourse by some distinguished jurist on his experience in having a tooth extracted or some equally weighty legal topic. This condition of affairs has not been due to any lack of appreciation of the importance of the subject, but because of the inadequacy of the means at command, as no textbook suitable for the purpose has been available. As a result most practitioners have had almost no instruction on their professional rights and responsibilities under the law. It is believed that in this epitome they will realize the information in question."

Not infrequently a fraction of our entire life's work is taken from us just because we did not know the law. Learning law in the court room is expensive, and generally quite unsatisfactory. An ounce of prevention is worth a ton of cure.

UNIVERSITY EDUCATION — PROFESSIONAL TRAINING

BY PRESIDENT EDMUND J. JAMES,
University of Illinois

[The following address was delivered at the Studebaker Theater, Chicago, Ill., June 11, 1914, before the alumni and graduating class of the College of Medicine, University of Illinois. President James, who has stood for advanced standing in the professions, has given here a classical definition of university education, and our readers will profit by studying this oration, which emphatically outlines the future for medicine, and dentistry as well.—EDITOR.]

[Continued from page 210 of the August issue.]

I believe that the great distinguishing characteristic of modern medicine and the medicine of the future will be this emphasis on the scientific side of the work, and it is only by this emphasis that medicine can really advance.

I think it is not too much to say, friends, that medicine and surgery have made more solid advances in the last seventy-five years than in the whole previous history of the race put together. This is certainly so if we except a few of the few fundamental discoveries upon which modern medicine was built up—like the circulation of the blood, the use of quinine in malaria, etc. The physician is dealing, in a certain way, half his time with diseases which are bound up in an inextricable way and inexplicable way—at least inexplicable at present—with subjective, psychical phenomena; and he comes more nearly having to deal with the same kind of problems as the clergyman than the practitioners perhaps of any other learned profession. The fact of it is that many of our ills are imaginary, but none the less real. Many of them spring out of subtle phenomena connected with consciousness; with the moral and spiritual and psychical sides of the individual. I know no better illustration of this than the remarkable effect which the confidence of the patient in the capacity of the physician oftentimes has upon the course of disease. I suppose that there are undiscovered and unexplored realms in this field which elude at present our scientific knowledge and scientific grasp. Perhaps they may do it for all time to come. But the extent to which the successful practice of medicine is simply a result of

the confidence of the patient in the physician—to that extent is the practice of medicine nothing more at bottom than Christian Science, than faith-healing; than any of the numerous methods by which any man may cure the ills of any other man if the latter believes strongly enough that he can do so. This is something which we, of course, who believe in scientific medicine ought never to lose sight of. The real strength of all these methods of psychic therapy is the same, whether the scientific man exercises them or the unscientific man exercises them. Sometimes the unscientific man has even an advantage over the scientific man in this sort of competition, because he stands upon the same low level of mentality as the patient which he treats.

I remember very well on one occasion being asked whether I thought there was more humbug in the practice of the medical profession on the part of the most distinguished physicians of the country than in the practice of any other of the learned professions.

I think this would be a very difficult proposition to maintain; and it is, of course, difficult to define in any positive way just exactly what is humbug and what isn't humbug. If a physician finds it necessary to establish an absolute feeling of confidence in his patient's mind, he may perhaps sometimes legitimately do things which smack of humbug.

I remember very well the account which a friend gave to me of the action of one of the most distinguished of American physicians, a man whose name you would all recognize as that of a thoroughly scientific man, a great practitioner and a statesman in and outside of the field of medicine. My friend said: "On one occasion I was in Dr. Blank's office just as he was finishing up his directions to a woman patient, a very influential and distinguished member of society in a great American city. He said: 'My dear madam, you must be careful about your eating; but you may safely take one slice of rare beef for luncheon.' The lady passed out, and the distinguished physician turned to his stenographer and said: 'At 12 o'clock today send the following communication to Mrs. So-and-so by special

messenger: "Dr. Blank has, after mature deliberation, decided that Mrs. Blank may have two slices of rare beef for luncheon."'" The physician went on with his routine work with seemingly no perception of the fact that his friend standing by looked upon this as more or less of a humbug.

The effect of it, of course, was simply to inspire in the mind of the patient a great confidence in her physician. She undoubtedly felt that the doctor had been thinking during the entire time after she had left the office—for three solid hours—about her case; and that of itself stimulated her glands to do their work better than they had been in the habit of doing. It facilitated physiological processes, put her in the way of getting well; and, after all, that was the thing which the physician was hired to do, expected to do and wanted to do himself.

Now, within this particular field, everything that can be cured by psychological effect in this way can also be treated, with more or less success, by the most unscientific men engaged in the field of medicine. That undoubtedly accounts for the fact of the enormous development of all kinds of faith cures and subtle remedies and means of treatment.

The real progress of medicine in the future depends upon the extent to which we can get hold of territory still occupied by the ignoramus; still occupied by suggestion; still occupied by weakness and superstition. This can only be done in proportion as the practicing physician himself is in his own work, and all the time testing up his results by scientific methods; bringing everything to the judgment of a scientific criterion. When he has done this fully we may expect, as a result of these contributions, that advance in medicine which will throw into the shade everything that has been done up to the present time.

It will not do for you to say: "We have no time as practicing physicians to give attention to scientific investigation or research. We have to look after the patients and collect their money and invest our earnings. We can not be expected to really add to our scientific knowledge of medicine. We must look to the director of the laboratory and the investigator of science along every line."

Now I am fully aware that (in medicine as in other subjects)

we may expect to obtain large results from properly equipped laboratories, with properly equipped directors, engaging in these fundamental subjects. But, friends, there is not a single one of you who is going out today to take up the practice of medicine who, if he will properly prepare himself for it, may not do something (however small the amount) toward increasing our knowledge of medical phenomena upon the basis of which great generalizations, wonderful discoveries, may perhaps be made. At any rate, it is the duty of every man who expects to take his place in the great medical profession to keep this point of view in mind, and never be satisfied until he has done the best he can to make his contribution also. When every physician looks at the problem in that light we may expect to see scientific medicine advancing at a rate of progress which will be without parallel even in the last seventy-five years of human history.

You must, then, have this fundamental training carried on to a point to qualify you to be an independent scientific judge, an independent scientific critic, an independent investigator on your own account; and you must have the desire and ambition to do something, at any rate, along this line, if the interests of the medical profession and the community are thus to be advanced.

But medicine is not merely a science. It is a practice, it is an art, which calls for a subtle knowledge of things which almost elude analysis. This is one of the reasons why one man succeeds in medicine and another man fails. One man is able, by something closely resembling intuition, to discern what is the matter with a patient, and by his common sense, and by his knowledge of human nature, and by his knowledge of psychology, he may succeed in prescribing a course of treatment which would be successful in restoring the patient to health, where another man of equal (or even superior) scientific attainment might make a complete fiasco. This is the element of truth which is to be found in the common proposition that a medical school is intended to train practitioners, and not scientists, and that that school which trains the largest number

of qualified practitioners is doing the largest possible service to the community. This is a phase of the work which no school may properly neglect; which every school must fully develop, must fully cultivate, if it is to accomplish the maximum result for its students. So we come to the clinical work—to that training which enables students to diagnose a situation; which gives them the sure touch; which, as far as possible, accumulates the experience of the profession as a whole in the best form for making it available for the instruction of the rising generation. Here, again, the medical school of the future is certainly going to be an entirely different institution, an entirely different enterprise, from the medical school of the past. The men who go out from it are going out better equipped for the work of the profession than you are going out. Consequently they are going to be your competitors in this field, as in the other already indicated, in such a way that if you do not consciously and persistently, by your own efforts, through your own practice and through your work, try to make good these defects, you will just as surely be relegated to the back seat before you have reached 50 years of age as the sun is to rise and set.

[To be continued.]

CHIEF PAUL'S GOLD TOOTH

BY CLAUDE H. BERMINGHAM

[This dental story appeared in *Home Life*, and is interesting.—EDITOR.]

[Continued from page 222 of the August issue.]

"'Take a peep, doc,' said he, genially parting his huge jaws.

"And the old gentleman did, sounded tooth after tooth with a tiny mallet, then shoved his hand in and skirmished about with his fingers.

"'You've got a good set, sir; a very good set indeed,' said he; 'only one needs pulling.'

"The man's toes twitched uneasily.

"'I weren't figurin' on havin' any yanked out, doc. Kind of thought you could patch it up a bit,' he said slowly, with a heave of breath.

"'Waste of time, absolute waste of time. Open your mouth,' barked the old man, dragging a forceps out of his pocket.

"The storekeeper coughed, and his toes twitched more energetically.

"'I ain't much used to this kind of business, doc,' he quavered. 'Don't much of it come around here so early in the morning. Will it hurt?'

"'Hurt a big hulk like you! Open your mouth,' was the answer.

"The fellow looked startled, naturally enough, I thought.

"'Just a minute—just a minute, doc,' cried he, hurriedly rising from the chair.

"But the old dentist wouldn't have it so. He shoved him back on to the chair.

"'You're sweating, man!' he cried. 'You ain't chilly. Open up and let's get the work done. It'll be over before you know it.'

"'Let me up, let me up,' urged the man desperately.

"'Ah, go on with you, you're jokin',' grinned the old dentist, and he pried open the jaws with a rasp and a lift.

"It was all over in a minute. But it was a minute of up in the air and down on the floor and up in the air again. It was like a jungle fight. But the old dentist held on to the tooth, and it had to come in the end. It was either the tooth or the head.

"'That was a tough one, a very tough one, but you stood it well,' soothed the old ruffian, for the fellow was big enough to kill the two of us.

"'Stood it well!' roared the man, jerking his hand from his bleeding mouth, and glaring at us with fiery eyes. 'You're a crazy fool! I thought you said it wouldn't hurt! How much do I owe you?'

"'Two dollars, sir, if you please,' was the gentle answer.

"The man vaulted over the counter, jabbed his hand into the till, and extracted two silver dollars, and down he crashed them before the old dentist. Then he raced back to the rear of the store, into the little room, and tumbled into bed.

"'Um, you pullum tooth, you makeum sick,' said a guttural voice over my shoulder.

"I turned sharply, and faced a squint-eyed, stony-visaged young Indian. He had slipped in noiselessly to see what the trouble was about.

"'You pullum tooth, you makeum sick,' he repeated, a clicking laugh coming from the back of his throat.

"Then he edged up to the old dentist.

"'You wantum pullum tooth, make money. Take good fur?' he said, scraping the floor with his moccasin.

"'Sure, Charlie; sit down, open your mouth,' answered the old man instantly, making a dive at him.

"'No, no, not me,' grunted the Indian backing off. 'Me gottum plenty teeth, hi-yu teeth.'

"'What's the matter, then? What are you hollering about?' flared the old dentist, caring nothing for mere politeness.

"'You hi-yu-brave-man-if you-getum-plenty-money-plenty-fur-good-marten-good-beaver?' he asked stolidly, running his words together like beads on a string.

"'You bet I am, sport. I'm a whale,' cried the old man heartily, with a shrewd eye on the buck. 'What's the game? Shake loose. I'm comin' with the goods.'

"Another laugh clicked in the fellow's throat.

"'You-pullum-tooth-Chief-Paul-me-give-you-hi-yu-good-fur-savvy?' he rumbled.

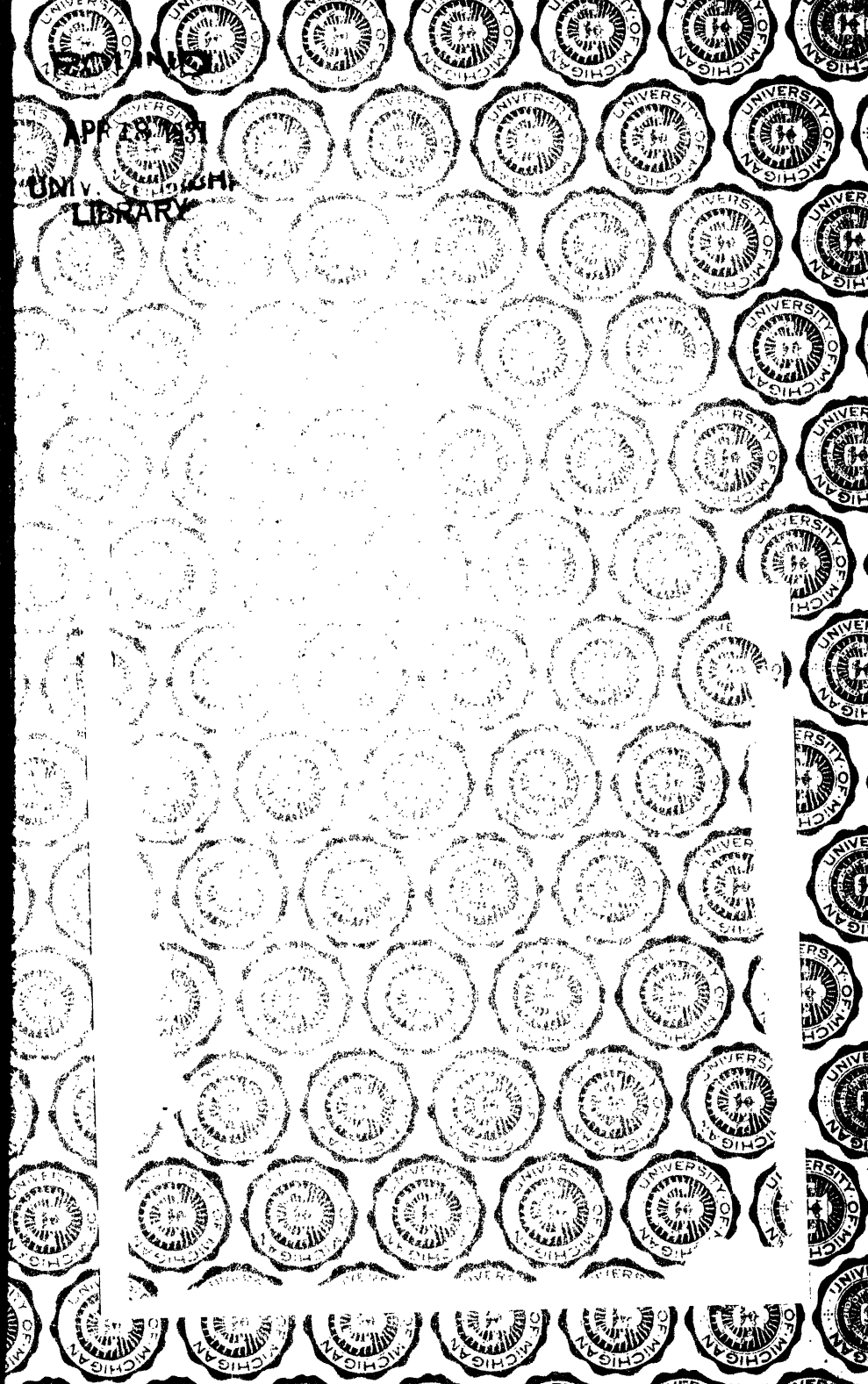
"'Sure, I'll pull his tooth, or pull his head off,' answered the old dentist. 'Who is he—where is he anyway?'

"'Dirty Indian, all-time-drink-hootch-like-white-man,' replied the young buck, a flash of fire in his somber eyes. 'One time he go outside on steamboat all same white man. Getum gold tooth all same white man. He come back and all time open mouth and laugh and show tooth. Indian woman like gold tooth. Indian woman like me before him getum gold tooth. Savvy?'

"That was the unfortunate youth's trouble. The chief stole the girl away from him with his gold tooth.

"The old dentist's eyes twinkled for a minute. It was a new use for dentistry—with unpleasant complications reasonably possible. But the old man was anxious for money.

[To be continued.]



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